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ALLEGED DEATHS THROUGH VACCINATION.

Telegraph 24 Aug. 1882

Yesterday, Mr. J. J. Henley and Dr. Airey commenced an inquiry in the board-room of the Norwich Workhouse with reference to the alleged deaths of several children through vaccination, and the serious illness of others from the same cause. The inquiry was instituted by the Local Government Board, at the in-

30th Augt 1882
Telegraph

VACCINATION INQUIRY AT NORWICH.

Yesterday, at Norwich, Mr. J. Henley and Dr. Airey resumed, on behalf of the Local Government Board, their inquiry into the deaths of ten children, alleged to have died after vaccination. Two cases were gone into, namely, those of Alice Sophia Lambert and Emily Elizabeth Tyler. The last-mentioned infant was vaccinated on June 13. When it was vaccinated the child was perfectly healthy, but after vaccination the body became much inflamed, and the child died on June 26. The certificate as to the cause of death, which was signed by Mr. J. Crook, M.R.C.S., attributed death to erysipelas from vaccination. Mrs. Tyler said she took her baby to Dr. Guy to be vaccinated between seven and eight in the evening of the same day. The child's arm began to swell and turn red. Next day the child got worse, the redness spreading from the arm to the elbow. On the Thursday morning it presented so alarming an appearance that she sent for Mr. Crook. When Mr. Crook came he said, "You had better take your child down to Dr. Guy's office, and let him see what he has done for it." Mr. Crook ordered witness to mix up some warm milk and water and put it on the child's arm. Her husband told Dr. Guy the state of the child. Dr. Guy came, and said he was very sorry. Witness told Dr. Guy what Mr. Crook had ordered, and he said "Go on with it." The inflammation spread from the arm to the chest, the other arm, and the back, and erysipelas began to show itself. On the second Sunday after the child was vaccinated the purple colour had extended down to the legs and the toes. The vaccination marks appeared on the first two days and then died away. On the thirteenth day after the vaccination the child died. Mr. Crook, surgeon, stated that when he saw the child it appeared to be suffering from erysipelatous inflammation, which must have arisen from some peculiarity in the skin of the child, or in the vaccination ichor introduced by Dr. Guy into its arm. Dr. Guy said he went to see the child at the request of its father, but as Mr. Crook was attending it he did not prescribe for it. He could form no opinion as to what caused the erysipelas. Both Tyler's and Threadgill's children were vaccinated from the same child. In both cases the erysipelas which developed itself was of the same type. In the case of Alice Sophia Lambert the child was vaccinated by Dr. Guy on June 6. Mrs. Lambert said she had noticed that the child was slightly unwell, but not sufficiently so to induce her to mention its illness to Dr. Guy. The child had been healthy from its birth. The arm went on nicely, and on June 13 Dr. Guy used her baby to vaccinate another child. The arm of her baby went on all right up to Thursday, June 15, when inflammation gradually spread down the arm. She took the child to Dr. Guy, and he gave her some lotion for the arm, which she put on. The child gradually became worse, and the inflammation spread quite across the chest, and the arm became swollen and hard. Dr. Guy came every day to see the child until June 26, when it died. Some further evidence having been heard, the inquiry was again adjourned.

AN ESSAY,

&c.

AN

ESSAY

ON THE

DIAGNOSIS

BETWEEN

ERYSIPELAS, PHLEGMON,

AND

ERYTHEMA;

WITH

An Appendix,

TOUCHING THE PROBABLE NATURE OF PUERPERAL FEVER.

"Artis magnam partem esse duco, posse quæ rectè scripta sunt speculari."
HIPPOCRATES.

BY

GEORGE HUME WEATHERHEAD, M. D.

GRADUATE OF THE UNIVERSITY OF EDINBURGH, MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, AND OF THE MEDICAL AND CHIRURGICAL SOCIETY OF LONDON, &c.

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TO

MATTHEW BAILLIE, M.D. F.R.S. L. & E.

PHYSICIAN EXTRAORDINARY TO THE KING,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS IN LONDON AND HONORARY FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS IN EDINBURGH, &c. &c. &c.

SIR,

The high rank you hold in the Profession, attained by acquirements perfected on the unerring principles of Anatomy, naturally points you out as the object of professional and public respect; and in dedicating this Essay to you, I feel honored in being permitted to offer this trifling tribute to your distinguished abilities, especially as it gives me an humble opportunity to acknowledge the obligations you have conferred on,

SIR,

Your most obedient

and obliged Servant,

GEORGE HUME WEATHERHEAD.

May 1st, 1819.
18, Upper Montagu-street,
Montagu-square.

PREFACE.

Baglivi justly observes, "Medicina non ingenii humani partus est, sed temporis filia." We shall be proud if, in the execution of the following little Essay, the motto can be substantiated in our own instance.

Great descrepency of opinion exists respecting the nature and cause of Erysipelas, and our steps towards a knowledge of this disease have been vacillating and unequal. Galen, in many parts of his works, repeatedly describes erysipelas in pretty accurate terms. Hoffman's descriptions are tolerably correct, and Callisen and Cullen had an excellent idea of erysipelas phlegmonodes; but amongst the writers of the present day we find nothing but a confused and deteriorated notion of its true nature and diagnosis.

Yet the young reader must not imagine that any of the authors quoted in this Essay have

given a strictly accurate account of this disease; on the contrary, almost all of them have blended in their descriptions diseases which really have no kind of resemblance.

It has been the endeavour of the writer of the present Essay to select, from a mass of discordant materials, such symptoms and distinctions as tend to confirm the results of his own experience in establishing pathognomonically the diagnosis of erysipelas.

When this made the subject-matter of his inaugural Thesis, the author had consulted few writers on this disease, and what was therein advanced was principally derived from his own observations; but since turning to the older writers he finds most of his remarks anticipated, several of which before this he had deemed new. This is an accident too common, and it would not require much industry to expose the boasted discoveries of many a modern, whose professional name and credit rest chiefly upon the ignorance or indolence of his contemporaries. This idea may be cultivated, and which perhaps, the writer may, at some future period, amuse himself in prosecuting.

The Greeks denominated this disease erysi-

pelas, which Constantine and Martinius derive from ἑρύω traho, to draw, τὸ πέλας, the neighbouring parts. Pollux calls the word ἐρυθρόπελος from ἔρυθρος ruber, red, and πελὸς niger, black, from the variety of colours the disease in its different stadia assumes. The Latins, saving Celsus, called it ignis sacer,* whence the words of Lucretius—

" Et simul ulceribus quasi inustis omne rubere
" Corpus, ut est, per membra sacer cum dicitur ignis."

Many of the ancients imputed pituita, melancholia and serum salsum, as causes of erysipelas. Some ascribed it to yellow bile, and others to a corrupt tenuity of the blood.

Paulus considered erysipelas to be of an inflammatory and bilious nature—" Cum enim sanguis probus et crassitie mediocris, in particulam aliquam universim confluxerit, ac propter copiam impactus inhæserit, inflammatio proprie appellata nascitur, ubi vero et sanguis et bilis flava simul incubuerint, erysipelas excitatur."† Aquapendens attributed it to a bilious humour.‡

* " Plinius aliique veteres erysipelas vocabant sacros ignes, Celsus tamen ut diversa genera describit."—Andernacus.

† De Inflam. Lib. 4. c. 17.

‡ " Fit autem erysipelas a bilioso humore."—Lib. 1. c. 8. Retz imputes it to the same cause.—Malad. de la peau.

Wiseman* says, "External causes do also concur to the production of erysipelas," among which he enumerates "the heat of the sun, fire, sharp instruments." Mr. Pearson appears to adopt Wiseman's notions, and accounts anger, the rays of the sun, fire, and the application of vegetable and mineral poisons, as capable of inducing this disease. Van Swieten defines erysipelas to be "Inflammatio superficiaria."—Heister thinks "Phlegmone est gradus major inflammationis quam erysipelas," and concerning its cause he adds, "eædem autem erysipelatis, quæ inflammationum reliquarum omnium causæ sunt."† Such also was Avicenna's opinion. Darwin deemed the wearing of flannel next the skin sufficient to excite erysipelas. Wilson‡ considers erysipelas "a combination of two complaints—of Synochus and Dr. Cullen's second species of phlogosis, the erythema, and consequently should have no place in a system of nosology." So much for the variety of opinions entertained concerning erysipelas.

The old writers, and after them many of the moderns, have, with servile deference, included

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* Book 1. ch. 6.

† Inst. Chir. cap. VI. Etiam Vide Platner, Inst. Chir. § 156.

‡ On Febrile Diseases, Vol. II. p. 129.

zoster as an erysipelatous affection. Now what resemblance this disease has to erysipelas I have always been unable to perceive ; indeed the arrangement of cutaneous diseases is yet in its infancy ; and, I say it with due deference, much more than merely abridging Dr. Willan's work remains to be done.

ESSAY, &c.

Among the many important parts of medical knowledge, that of Diagnosis is not the least, and nothing more frequently exemplifies the skill of the physician, or decides his professional superiority, than the judgement he evinces in this branch of his profession.

Accurate discrimination in physic implies an acuteness of perception, capable of discerning differences, perhaps trifling in themselves as morbid symptoms, yet importantly diagnostic as practical distinctions. There are many diseases which have several symptoms in common, and those which are pathognomonic are frequently so indistinct as to require the greatest attention on the part of the physician to beware that they are not overlooked.

From such inattention many diseases of very dissimilar natures have been classed under the same description: the cutaneous diseases afford striking examples of this, and the terms scorbutic, herpetic, leprous, are sweeping designations, including several distinct diseases and many dissimilar symptoms; among which the terms erysipilatous and erythematous have been involved in the like indefinite application.

The object of the following Essay is to attempt a diagnostic separation, and to point out those differences that mark the individual diseases which are more especially apt to be confounded with erysipelas; although in this I purpose more particularly to contrast it with erythema, yet I shall, first of all, briefly consider its relation to phlegmon, with which it is somewhat liable to be confounded.

The diagnosis of erysipelas is a task of some difficulty, in the prosecution of which allow me, reader, to bespeak your patient and indulgent attention.

First,—Erysipelas may be confounded with phlegmon, between which the diagnostic differences are these :—

The tumour* in erysipelas is soft, diffuse, and undefined.

In phlegmon it is hard, tense, pointed, and circumscribed.

In phlegmon the pain is lancinating, acute, and throbbing.†

In erysipelas the pain is less violent, somewhat obtuse and burning, "diffusum ardoris magis quam fixum doloris sensum creans."‡

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* "A vera inflammatione," says Sennertus, "etiam differt (erysipelas) quod "minus tumeat, minus pulset, minus renitatur et tendatur; non tamen minus "sed etiam magis rubeat et caleat." In another place he adds, "quod si in "erysipelate major sit tumour, id erysipelas potius nothum est quam exquisi-"tum et purum."—De Febr. Lib. ii. c. 16.

† Galen remarks, "non tamen similiter dolet erysipelas ac inflammatio." Meth. Med. ad Glauc. Lib. 2.

"Verum tensio phlegmonis et dolor ejus est propter tensionem et quandoque fit major, quapropter dolor erysipelæ est minor."—Avicenna, Lib. iv. fen. 3. tr. 1.

"In erysipelatis minor est dolor."—Fabr. ab Aquapendente, Lib. i. c. 8.

"Dolor pungens magis, quam pulsans."—Burserius, Tom. ii. § 24.

‡ Callisen, Inst. Chir. Hodiern. § 216.

In the former the effloresence is of a dull red, frequently inclining to a yellow colour.*

In the latter it is vivid, shining, and of a pellucid appearance.

In erysipelas the redness easily vanishes by the pressure of the finger, and quickly returns on the pressure being removed. †

In phlegmon the redness is more permanent and disappears less readily under pressure.

In the one the thermometrical heat exceeds that of the other.

In erysipelas the sensitive heat predominates.

The fever of erysipelas is more vehement‡ than that occasionally accompanying phlegmon.

The inflammation of erysipelas does not fade

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* "Erysipelas vocatur ille affectus, multo calidior inflammatione et aspectu flavior."—Galen, Meth. Med. ad Glauc.

"Et vides in rubidine erysipelæ colorem croci."—Avicenna, loco citato.

"Color ruber seu in flavum vergens."—Aquapendens, ut supra.

† "Et si tetigeris, sanguis facile subfugit, rursusque affluit."—Galen, ut supra.

"Rubido erysipelæ destruitur per tactum a loco, et albet ejus locus causa subtilitatis materiei rubræ, aut separationis ejus, deinde redit velociter." Avicenna, loc. cit.

‡ "Et erysipela attrahit febrem vehementius quam phlegmon."—Avicenna.

"Febres in erysipelate fiunt vehementiores, quam in phlegmone."—Aquapendens.

imperceptibly, like as in phlegmon, into the colour of the neighbouring skin, but terminates in an irregular but well defined margin :—

Phlegmon chiefly attacks the cellular membrane ; *

Erisipelas, the dermoid texture ; "Telam cellulosam non complectit erysipelas," says Callisen, "nisi phlegmonæ nuptum," for "propria inflammationis *(Erys.)* sedes in vasculis summæ cutis, cruori vehendo non dicatis quærenda est." †

Spontaneous vesications are common in erysipelas ;

Their occurrence in phlegmon must be deemed adventitious :—

Phlegmon is much benefited by local bleedings ;

Topical detraction of blood, whether by leeches or scarifications, is a doubtful practice in erysipelas.

Phlegmon readily tends to suppuration ;

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* "Phlegmone potissimum in membrana adiposa hæret; erysipelas integumenta corporis externa, vel et membranaceas partes internas, obsidet." Van Swieten in Comm. Boerh. § 380.

† Inst. Chir. § 220.

In erysipelas, when pure and uncombined, it is questionable whether this ever takes place. Professor Callisen, who, with Dr. Cullen, has given an excellent description of erysipelas phlegmonodes, justly says, " raro vel *nunquam* veram suppurationem admittit erysipelas." *

That suppuration frequently accompanies erysipelas no one can deny ; but whether this arises from an extension of erysipelatous inflammation into the texture most usually the seat of phlegmon, or whether the topical irritation of one inflammation acts as a local stimulus, and thus excites phlegmon, is a question not indis-

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* That this opinion is not peculiar, I quote the following authorities :—Sennertus makes a similar observation : concerning phlegmon he remarks, " facilius suppuratur quam discutitur ; contra vero in erysipelate seu rosa " sanguis est tenuior, calidior et ex capillaribus venis per poros in cutem dis- " persus, unde et facilius discutitur quam suppuratur."—De Febr. Lib. ii. c. 16.

" Nunquam in veram suppurationem abit."—Lorry, de Morb. Cutan. c. 3. Art. I.

" Il est rare que l' èresipelle suppure."—Tissot, avis au peuple, des Erisip.

" Quanquam rarissimum est, erysipelas in suppurationem desinere, nisi in " phlegmonodes ipsum extiterit."—Burserius, tom. ii. cap. 2. § 128.

" Sistit nimirum maculas latas non supurabiles."—Sagar, Syst. Morb. Sympt.

" The true erysipelas never ends in an abscess."—Macbride, Method. Introd.

putably apparent. I confess that I incline to the latter opinion, and on these reasons :—

Erysipelas seems a disease *sui generis*, arising most frequently, constitutionally—phlegmon and erysipelas are not convertible—the pus when evacuated puts a stop to the phlegmonous action, whereas the peculiar action of erysipelas seems protracted by the bursting or opening of the abscess *—the wound does not heal in the usual way—pus in a short time ceases to be

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* " Ab erysipelate putredo et *suppuratio* malum."—Hippoc. § vii. aph. 20.

" Periculosum est, si incongrua *arte* ad suppurationem perducitur."—Junker, Consp. Pathologiæ, Tab. xx.

The old writers distinguished the inflammation, blending erysipelas and phlegmon, by the terms erysipelas phlegmonodes, and phlegmon erysipelatodes, according as the one or other predominated. Galen makes this distinction, " Quemadmodum id," says Galen, " quod subjectam carnem attingit, neque ex tenui omnino fluxione fit, non solum erysipelas est, sed mistus affectus ex erysipelate et phlegmone; in quo quandoque propria erysipelatis symptomata prevalent, et a recentioribus medicis vocatur talis affectus erysipelas phlegmonodes."—Meth. Med. ad Glauc. Lib. ii. c. 1.

Darwin in his zoonomia also observes, that erysipelas is attended sometimes with inflammation of the cellular membrane beneath the skin; whence a real phlegmon and collection of matter becomes joined to the erysipelas. Vol. ii. ch, 2. p. 220 : and elsewhere the same author remarks, " that these kinds of inflammation can exist together, and some parts of the cellular membrane may suppurate at the same time that the external skin is affected with erythema or erysipelas." Cl. 2. p. 193.

secreted,—the sore contracts rather than granulates, and serous matter is discharged from the wound. This discharge is the more copious, the greater the œdematous-like tumour present, and the sore is in consequence the longer in healing. Were it merely an extension of the same action, the symptoms in each texture should coincide in action, in duration and progress, without any dissimilarity. That suppuration is not natural to erysipelas receives some countenance from the pus not being contained in a circumscribed cavity,* but is diffused through the cellular membrane.

Bichat cites a case of erysipelas where "la suppuration devint abondante et *sereuse*."† There are few cases stated by this author, yet these few furnish somewhat to assist in the diagnosis of erysipelas. That the action of erysipelas and phlegmon are of a very different nature, is illustrated in point by a case men-

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* Vide Pearson's Principles of Surgery. § 289.

† Œuvres Chirurgicales de Desault, par Bichat, p. 591. tom. ii.

tioned by him, where "un cautère établi au bras gauche cessa de suppurer," when attacked with erysipelas, and that the erysipelas was repelled by reproducing the suppuration by an ointment made of basilicum and powdered cantharides. This is a fact which goes strongly to establish the distinct natures of phlegmon and erysipelas; and tends to shew that they are not convertible, that suppuration is not natural to erysipelas, and that the phlegmon present is not an extension of the erysipelatous action. I had an infectious erysipelas, that raged for two years in his Majesty's Ship Jalouse, * under my care, and in all the cases in which suppuration took place, shortly after the matter was evacuated the pus ceased to be secreted, and the discharge became almost wholly serous: and as the tumour continued but little diminished after the evacuation of pus, the swelling was evidently owing to that serous effusion attending erysipelas more particularly to be noticed when treating

Secondly,

* For the histories of some of the cases, Vide Medical and Physical Journal for June, 1814.

OF THE DIAGNOSIS BETWEEN ERYSIPELAS AND ERYTHEMA.

In pointing out the diagnostic differences of erysipelas, those between it and erythema are most apt to be confounded. The distinction frequently requires much attention, and to state those criteria which are to guide our judgement is the chief object of the present Essay.

"Les distinctions établies (says Bichat) entre les différentes espèces d'érysipèle, ayant presque toujours été négligées dans la pratique et la plupart des auteurs n'indiquant, pour tous les cas, qu'un seul et même traitement on ne peut faire correspondre l'histoire des moyens curatifs avec les divisions des livres.*"—yet notwith-

* Œuvres Chirurgicales de Desault par Bichat. p. 587.

standing this judicious remark, both Desault and Bichat considered erysipelas and erythema as one disease : speaking of the former, Bichat says "la primiere et la plus simple et celle que Sauvages et Cullen appellent erythema.*

To shew how much he misinterpreted the ideas Dr. Cullen entertained concerning these two diseases, I shall cite the following passage : "Vox erysipelas tum pro phlogosi erythemate tum pro febre erysipelacea, a scriptoribus medicis usurpatur, sed *recte* Sauvagesius vitium cutaneum ; quod nullam febrem nisi symptomaticam, sibi junctam habeat, erythema appellari ; et erysipelas, tantum *febris illa exanthemata*, quam erythema sequitur, vocari velit." From the above it is evident that Dr. Cullen considered them as two very distinct diseases, placing the one under the phlegmasiæ and the other among the exanthemata. Cullen here, as in several other respects, appropriates the opinion of Hoffman, as well as of Sauvages, who in Vol. 2. § 1. c. 13.

* Œuvres Chirurgicales de Desault, par Bichat, p. 581. Tom. ii.

says, "ad exanthematicas febres merito etiam refertur erysipelacea."

Linnæus deemed erysipelas "protypus exanthematicorum."

Burserius expresses himself decidedly of this opinion, and in tom. ii. § 15. he gives an admirable, though brief description of the "varia erysipelatis stadia."

Plenk very properly does not reckon erysipelas a cutaneous disease, and therefore does not include it in his "Doctr. de Morb. Cutan."

Dr. Willan describes erythema as "a mere rash, and not accompanied by any swelling, vesication or regular fever." In erysipelas there is always some tumour, frequently vesication, and not uncommonly fever.* Dr. Cullen esteems

* Vide Galen. Lib. ii. de febr. cap. 16.

Sennertus says of this reference, "Hoc saltem repeto, morbum primarium febrem esse."—Lib. v. p. 1. cap. 7.

"Præcedente

the presence of fever as characteristic of erysipelas, and that the fever is only symptomatic of erythema, although this is a valuable diagnostic, yet it must be remembered that fever is not a necessary symptom of erysipelas, as it frequently occurs in which no febrile symptom either precedes or follows the efflorescence.†

A symptom peculiar to erysipelas and not to erythema, is the torpor and affection of the brain, that not uncommonly precedes the efflorescence; thus drowsiness is a symptom of incipient erysipelas and not of erythema.

Delirium is a frequent attendant on the one, and not, or if at all, casually, on the other.

"Præcedente febre (ut fieri solet)."—Platerus, Lib. ii. 517. Basil, 1641.

"Inflammatio aut in ipso febris initio, vel hoc ipso die vel secundo aut longissime tertio erumpit."—Vogel de cogn. et cur. affect. § 245.

Wiseman says, erysipelas "begins for the most part with some rigour, and is continued with a fever."—Book i. ch. 6.

In another place he adds, "indeed there is no erysipelas that hath not a fever, either visible or latent, going before it."

† Non nunquam erysipelas absque ulla febri oritur."—Meza, Comp. Med. Pr.

Erysipelas creeps, * erythema does not.

In the former, the efflorescence is fading in one part, whilst it glows vividly in another.

There is always great danger attending erysipelas where it attacks the head and face. Celsus remarks this—"Id autem quod ἐρυσιπελας vocari dixi, non solum vulneri supervenire, sed sine hoc quoque oriri consuevit: atque interdum *periculum magnum* adfert; utique, *si circa cervicem aut caput constitit.*"† Hippocrates and others ‡ give the symptoms indicating this attack, and Hoffman in particular describes them competently well.§

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* "Erysipela pura serpit seu ambulet, et non est ita in phlegmone."—Avicenna, Lib. iv.

† Lib. v. c. 26.

‡ "Rubores circa aurem, ex prægresso dolore in febribus orti, signum quidem erysipelatis in facie futuri."—Hipp. Coac. Prænot, § 201.

"Capite doiet universo, adeo ut flammis id uri putet."—Paulus Ægenetæ de Erys. Cerebri.—Lib. iii. c. 8.

§ "Oculi tumore clauduntur, spiritus difficulter trahitur, nares et fauces "aride valde sunt et siccæ, et torpor plerumque ac sopor conjunctus est, fa- "ciem si occupat."—Hoffm. § 1. c. 12.

Etiam vide, Wepfer de affect. capitis, obs. 81.
———— Etmullerus, de Erys.
———— Van Swieten, § 723.
———— Tissot, "Avis au Peuple."

I am not aware that a purely erythematous affection of these parts is attended with any peculiar danger or symptoms.

The danger ensuing from the sudden repulsion of erysipelas, has been noticed by most writers on this disease, and in this respect it resembles the other exanthemata. Hippocrates observes, " Erysipelas vero foris quidem extare utile, *intro autem vergens lethale;* cujus quidem rei indicium est, cum rubore evanescente pectus gravatur et ægrius spiritum trahit æger;"* and in his aphorisms, " Erysipelas fores intro converti, malum, intro vero foras existere, bonum."† Galen, in his commentary on this last passage, says—" Non erysipelas solum, sed alium quemcunque affectum ex profundis et principibus partibus ad cutem traduci, et bonum signum et bonam causam esse existimandum est; contra vero ad internas et profundas corporis partes remigrare, malum."

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* Coac. Prænot. S. ii. § 366.

† Aph. 25. § vi.

The symptoms consequent on repulsion are intense fever, prostration of strength and appetite, dyspnœa, vertigo, sopor, phrenitis, gastritis, gangrene, sphacelus, death. Theophilus Bonetus remarks, "Quicquid ex visceribus at cutem abit non debet retrudi."* The opposite of this position is often obvious in the inverse, few but have witnessed the dangerous symptoms induced by the introversion of cutaneous diseases. This author gives an instance of repulsion in the case of a young man who had an erysipelas, affecting the right leg, repelled, and three days afterwards he was attacked with it in the head, accompanied with great difficulty of breathing: phrenitis followed, and on the eleventh day of the disease the patient died. On opening the body, besides other morbid appearances, the right side of the pleura was found beset with miliary pustules, and the dura mater appeared spread with similar eruptions. "Earum quadam dissectæ," says Bonetus, "humorem crassiulculum effunderunt, sebo non adsimilem."

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* Sepulcritum, Lib. I. § 6.

In all these respects erythema bears no similarity ; first, because this disease is not very liable to be repelled, and secondly, when it does disappear abruptly, the consequent systematic derangement is never of so grave a nature.

Those who may wish to consult authors on the repulsion of erysipelas, I beg to refer as below.*

It is rare that the efflorescence precedes the fever of erysipelas ; yet cases may occur wherein the external symptoms are at first unaccompanied by fever; but by the imprudence of the patient, incongruous skill of the physician, or through the progressive aggravation of the dis-

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* Fabr. ab Aquap. Lib. i. c. 8.
Sennertus, Pract. Lib. v. p. 1. c. 7.
——— Lib. de Febril.
Hoffmanni Opera. p. 1. c. 6. § 45.
——— Tom. i. S. 1. c. 8. § 25.
——— ——— ——— c. 16. § 20.
——— de Metast. c. xi. § 4, and 26.
——— Philos. Corp. Hum. Morb. p. 3. c. 1. § 13.
Prosper Alpinus, de Præsag. Vita et Morte. Ægr. Lib. i. c. 11.
Van Sweiten, § 593.
Junker, Consp. Path. Tab. xx.

ease, fever may be excited posterior to the efflorescence.

Erythema resembles erysipelas in the redness vanishing and returning on the pressure of the finger being applied or removed; in both, the inflammation is so superficial, that slight pressure totally impedes the capillary circulation.

Erysipelas differs from erythema, in being sometimes, nay, when once excited, and under certain circumstances, perhaps in being always infectious; that it is sometimes so, is, I think, abundantly established in many instances. I may add, that the impression of its infectious nature is further strengthened in my mind, from having witnessed its influence during a period of two years, and, contrary to what some have asserted, I have seen it infectious under an inflammatory form. Dr. Willan, in his Preface to the Report of the Diseases in London, says, "the œdematic and gangrenous forms of erysipelas may be combined with malignant fever,

and thus communicated from one person to another."

Amongst the numerous medical works that daily crowd the counters of the bookseller, few have appeared, which have astonished the medical world more than that of Dr. Bancroft on the Yellow Fever; the patient research it evinces, the mathematical mode of reasoning it examplifies, the conviction it flashes on the mind of the candid and unprejudiced, altogether afford a truly admirable specimen of what medical logic ought to be. According to this highly respectable author's views of contagion, erysipelas, like other infectious complaints, must invariably be, *rebus faventibus*, a contagious disease, or not at all so. The sporadic occurrence of erysipelas is not more unaccountable than that of typhus, and many other diseases, whose infectious nature is unquestionable.

There are some contagions so weak, that they require both condensation and accumulation, independent of a state of body susceptible of

infection, before they can operate as infecting principles. This is too evident to every physician to require examples. Every infectious disease affords a proof of it, wherein free ventilation, by diluting the morbid virus, will render innoxious very powerful infecting agents. On the other hand, where the infecting cause is naturally feeble, confinement, accumulation, or close proximity is absolutely necessary to render it efficient. Opthalmia extends an infecting influence but to a short distance. The plague, and, I am inclined to think, erysipelas, are to be ranked among the same class of infecting agents requiring proximity, accumulation, and confinement, to act by infection. Sydenham was of opinion that erysipelas was a good deal like the plague, and mentions the suspicion of some authors that there is a MALIGNITY joined with this disease. Hoffman has a similar remark: "quin multum affinitatis alit cum morbo omnium atrocissimo, ipsa febre pestilentiali."*

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* Tom. ii. § 1. c. 13.

Erythema has never been observed to be infectious.

Erythema, perhaps, is to be considered as a simple phlogosis phlegmone, affecting the external superficies of the skin ; the best example of which is to be seen in that cutaneous inflammation excited by a slight scald, or by blisters applied for a short time, or after exposure of a part of the body to the intense heat of a torrid sun.*

Erysipelas attacks wounds and ulcers.†

Erythema is not said, even in the vague language of the day, to attack either. It may be *excited by* the irritation of the wound or ulcer, and indeed usually, in a *chronic* form, surrounds old ulcers to some breadth from their margins; in which state it assumes a dark purple tint, is

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* Vide Plenk's " Erythema ab igne,
" ——— ab attritu,
" ——— ab applicatis acribus," &c.

† Hippocrates remarks this in his book de Ulceribus, § vi.

even cold to the feel, and readily bleaches on the pressure of the finger. I consider the inordinate redness of the fauces from slight inflammation to be an *acute* erythema; in other words, a superficial membranous phlegmon.

Erysipelas again, I am inclined to believe, possesses the specific nature of the exanthemata. We see phlegmon to assume different characters according to the texture it attacks. Parts, though affected with phlogosis phlegmone, yet from their structure are not capable of evincing all the nosological distinctions of their character, as in cases of inflamed ligaments, membranes, and bones, where there is wanting one of the most prominent features of phlegmon, to wit, the tumour of the inflamed part; yet no one doubts but that these inflammations in their nature have the same action, are excited by similar causes. and require the same method of cure.

That inflammation which ensues from wounds and punctures of the periosteum, pericranium,

and tendinous expansions, or fasciæ, is usually described even by modern authors, by the vague expression of "a kind of erysipelas." Very little consideration, in my opinion, is necessary to convince any one of the unfit appropriation of this term: let us therefore abandon it.

In erythema there is no tumefaction, "la tuméfaction est légère, *le plus souvent* insensible."* Erysipelas again, if I am not deceived, is always accompanied with more or less swelling, and as this is, in my opinion, the most constant, so I would consider it the most diagnostic symptoms of this disease; the tumour in erysipelas is soft and diffuse—in erysipelas œdematodes this is most apparent, even in erysipelas phlegmonodes, if the disease be severe, the tumour will pit on pressure.† Whilst an infectious erysipelas, of a phlegmonous type, raged on board his Majesty's ship La Jalouse, I determined to ascertain if the tumour, even

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* Œuvres Chirurg. de Desault, par Bichat, p. 581. Vol. II.

† Vide Med. and Phys. Journal, for June, 1814.

in slight cases, was owing to the effusion of serum into the equal and continuous extension of cellular membrane, I thrust a lancet into the part most tumid and soft, when serum, tinged with the blood from the puncture, flowed from the aperture; by squeezing I could urge the fluid at pleasure, though distant from the orifice, through the puncture, leaving the compressed part wrinkled and flaccid.

This effused serum frequently remains unabsorbed long after the other symptoms of the disease have wholly disappeared. It is an œdema always difficult to remove; for if the effusion be not discussed by absorption as the erysipelas decreases, it is a sure mark of topical lymphatic debility induced by the disease, or it is consecutive of general systematic relaxation. Its presence is a proof of debility, either local or general. Bichat mentions a case of œdema following an erysipelas, where "malgre un bandage compressif il (l'avant-bras) n'avoit pas encore reprit tout-a-fait son volume naturel un mois après la disparition de l'erysipele."

Hoffman remarks the same difficulty—" minimum," says he, " in sanguineo-phlegmaticis et cacochymicis post erysipelas remanet ingens tumor pedis, et tibia magnitudine tripla naturalem statum excedat, isque tumor *difficulter admodum abigitur.*"

Wiseman also notices, that " though the erysipelas do not arise with any circumscribed tumour, yet in its progress the member is swelled, and *remains so* after the erysipelas is breathed forth, and for want of discussion doth frequently become œdematous."*

In such cases, a thickening and hardness of the cutis vera are left after the absorption of the effusion, which discusses in time, or this may be accelerated by friction, and the support of a tight bandage.

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* Book I. ch. 6.

On the same subject vide Pearson's Principles of Surgery, § 314. This author confounds erysipelas and erythema, and I confess it puzzles me to perceive any real difference between his description of erysipelas, and of œdema cum erythemate.

Etiam vide Wepfer de Affect. Capit. obs. 84.

It seems the peculiar action of erysipelatous inflammation to excite the exhalants to pour out serum into the surrounding cellular texture, producing œdema beneath the skin, and vesications in the cellular membrane lying over the cutis vera. Piso was the first, as far as I am aware, who ascribed the diffused tumefaction of erysipelatous inflammation to effused serum,* and he classes this disease among the "morbi externi habitus a diluvie serosa."—Wiseman thought that erysipelas was generated of a hot serum in the blood,"† in which Hoffman concurs.‡

These bullæ do not invariably accompany erysipelas, nor is their presence singly to be considered as certainly pathognomonic. Bullæ do not unfrequently attend erythema—when the skin, as of the back, is exposed for some length of time to the heat of a torrid sun, erythema, with large vesications, is usually produced.

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* Obs. c. 41.

† Loco Citato.

‡ "Serum acre causticæ naturæ." Tom. ii. § 1. c. 13.

This is an accident I have often witnessed in South America, the West Indies, &c. Strong rubefacients, cantharides, the application of boiling water, also produce erythema with large bullæ. Bullæ, however, are spontaneous in erysipelas, their presence in erythema must be deemed contingent.* Dr. Willan mentions a case in which bullæ accompanied the efflorescence of scarlatina.

Dr. Cullen, in his definition of erysipelas would insinuate, by the phrase "in magnas vesiculas *abeunte*," † that vesication was a ter-

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* Piso gives a case (obs. cl.) where erysipelas attended with vesication extended over the whole body, "sed ea (maculæ) non purulentâ materiâ, sed "*sero* duntaxat ebulliente turgebant, ut totum corpus vesiculis scatere vide-"retur."—§ v. c. 4.

Schroeder mentions a similar circumstance, as also de la Motte, Tom. i. obs. 92.

Vogel likewise observes, "interdum fere omnes partes corporis simul infestat.—De Cogn. et Cur. Affect."

Du Halde in his "Histoire de la Chine, relates a strange effect produced by the exhalations from the Rhus vernix, of Linnæus, in which the body *swells*, crepitates and pours out a large quantity of *serum*.—p. 317.

Patients not unfrequently die comatose in erysipelas. Query, from serum effused into the ventricles?

† Vide Nosolog. Synopsin.

mination of this disease; œdema is very frequently so.

The bullæ of erysipelas I regard merely as the more external effusion of the serum from the cellular texture beneath the cutis vera into the cellular texture betwixt the dermis et epidermis. The difference between bullæ and vesiculæ is owing, if I be not mistaken, to the manner in which the fluid is poured out. It is not uncommon to see bullæ and vesicles irregularly intermixed: they both exist in the cellular texture lying beneath the epidermis. If the serum is poured out slowly and in small quantity, the cells of the cellular membrane gradually yield to the effusion, but when the distension becomes too great the cellular septa are ruptured, and the fluid of many cells comes to be contained in one bag, forming a bulla. Again, if the effusion is rapid and copious, this rupture is almost immediate. Bullæ are then formed at once. The application of cantharides affords a frequent opportunity of seeing both bullæ and vesicles produced by the same

cause and existing at the same time, in which the fluid from the bleb is evacuated at once by a single puncture, but that from the vesicle by repeated and separate incisions.

Dr. Willan seemed to consider bullæ as the specific distinction of erysipelas. With becoming deference, I am inclined to believe, that as the effusion of serum into the sub-cutaneous cellular membrane is the most constant, so it may be considered as the most characteristic symptom.

The bullæ of erysipelas arise, in my opinion, from the superficial extension of the sub-cutaneous effusion. The casual bullæ attending erythema, on the other hand, are the immediate effects of exterior excitement ; as in those from scalds, &c.—A curious circumstance may be noticed touching the formation of blebs, which is, that the contained fluid does not exude through the porous apertures of the cuticle, though from the distension of that membrane, its perforations ought to be more expanded. This, if I

mistake not, would indicate that the exhalants use an expulsive, and therefore contractile power in propelling their contents through the epidermis.

Œdema does not succeed to erythema. The only other instance, saving erysipelas, that at present occurs to me, wherein œdema succeeds to cutaneous efflorescence is in that swelling of the hands and feet which frequently follows scarlatina; and here the succeeding œdema is always the greater, according to the degree of the preceding efflorescence.

Erythema does not pit on pressure. There is an erythema mentioned by Dr. Willan acceding in consequence of the great distension of the cutis in some cases of anasarca; but here it is the anasarca which *previously* existed that pits.*

Œdema is synchronous with, and consequent

* Morgagni mentions an erysipelas attacking the œdematous feet of a consumptive patient; but the description is so vague as to render it questionable whether the disease were erysipelas, or merely erythema from distension. Epist. 22. Art. 16. Etiam vide Epist. 39.

to the efflorescence of erysipelas, but in erythema the œdema when present *precedes* the cutaneous inflammation.

In scarlatina the œdema does not supervene till after the total disappearance of the efflorescence.

Erysipelas, when about to be severe, is commonly ushered in, in the words of our illustrious Cullen, by "Synocha duorum vel trium dierum, plerumque cum somnolentia, sæpe cum delirio." These symptoms, in my opinion, furnish a strong analogical proof of its infectious nature, and pointedly evince that it is frequently a disease, perhaps always, originating in constitutional idiopathic derangement.

Erythema, if it does not arise from an external cause, is frequently symptomatic of some disorder of the primæ viæ.

Erysipelas is said to originate from the same source. It may be asked, and it remains to be

determined, whether the derangement of the primæ viæ, in the latter case may not frequently be the progressive symptoms that demonstrate the constitutional affection which so frequently precedes the external efflorescence. This consensus between the external surface and primæ viæ is every day obvious in the rashes occurring in children from derangements of the bowels; and on the other hand, cutaneous eruptions equally derange the functions of the stomach and intestinal canal. In all infectious exanthematous diseases, the disorder of the digestive organs for the most part precedes the external efflorescence; small-pox, measles, and scarlatina furnish daily examples of this. Bowel complaints are relieved by diaphoretics, and frequently induced by whatever obstructs the perspiration. Cutaneous diseases, on the other hand, are equally benefited by purgatives.

Dyspepsia is a frequent cause of erythema. Bilious symptoms are common both in erysipelas and erythema. With regard to erysipelas, I am inclined to think that derangement of di-

gestion, though it may predispose to, yet it cannot of itself induce erysipelas.

An affection of the fauces is not unfrequently concomitant on erysipelas of the face, from the extension of the inflammation to the mucus membrane lining the mouth ; the parotid and submaxillary glands are also sometimes affected. I have seen the inguinal glands inflamed when erysipelas was situated in the leg.

A similarity of function appears so far between the external skin and the stomach, that, though the former exerts no digestive powers, it absorbs nutriment by its lymphatics, and excretes a fœcal matter by its pores. They have mucous glands in common ; they exert the power of corrugation, and a peristaltic motion is, at times, conspicuous in the testes, from the vermicular action of the scrotum.—Whence the ready extension of erysipelas of the face to the fauces downwards.

Erysipelas is also to be distinguished from

erythema, by the different effects of the same application in these two diseases. Unctuous medicaments are beneficial in many cases of erythema, in lessening the sense of heat and pain, as in erythema from the scorching of the sun, from scalds, or from acrid applications; whereas oily applications prove invariably pernicious in all cases of erysipelas.* Unctuous remedies in erythema defend it from the stimulas of the external air; but in erysipelas they prove noxious by confining the acrid perspirable matter. I should nevertheless doubt the efficacy of ointments in erythema arising from disorders of the primæ viæ.

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* "Externa omnia unctuosa, omnia oleosa, &c. magis quam ipsum malum sunt fugienda."

"Hæc aut ulcus depascens faciunt, aut Erysipelas in gangrænam transmutant."—Etmuller, Chir. med. de Erys.

Hildanus, Obs. lxxxii. Chir. Cent. I. relates a case of a peasant, who, by the advice of a barber, anointed his left hand and arm, affected with erysipelas, with the oleum rosaceum, in consequence of which gangrene seized the whole hand: "ex quibus," says Hildanus, "perspicuum est oleum maxime inflammationibus adversari." This observation is as ancient as the time of Galen, who notices it in his book "de Simpl. Medic. Facultat."

Heister likewise bears testimony to this fact, "Imprimis autem," says this author, "periculum magnum erysipilas affert si vel frigida, pinquia atque oleosa medicamenta externa imponuntur."—Inst. Chir. cap. vi.

When treating of the diagnosis between phlegmon and erysipelas, I stated my reasons for thinking that suppuration is not natural to the latter, and this receives a strong support from considering the hurtful effects of warm cataplasms in erysipelas. Although cataplasms may accelerate the phlegmonous suppuration, they invariably aggravate the erysipelatous symptoms. If they are used to promote the suppuration of erysipelas they must fail in their object; since, as we have endeavoured to establish in a former part of our Essay, pure erysipelas never does suppurate. If they are used as a fotus, it is a clumsy mode of applying it. In my opinion, it is better to allow the phlegmon, combined with the erysipelas, to discuss or suppurate of itself. Desault employed nothing externally, unless when accompanied by a wound or ulcer, then he applied an emollient cataplasm, but so as never to extend beyond the edge of the sore. Such likewise was the practice of Stoll * and Hoff-

* Rat. Med. Æg. xx. c. 10.

man.* "Ipso loco dolenti," says the former, "nil remediorum admovimus;" and the latter inculcates, that "in externorum usu cautione opus est maximus." Mr. B. Bell is another author who condemns the use of warm cataplasms as pernicious in erysipelas, and adds, "that any effusion with which it is attended is commonly thin and acrid, and *is not convertible into pus.*"†

Farinaceous powders are very commonly applied over erysipelatous surfaces: they certainly lessen the efflorescence by *whitening* the part over which they are applied; but they are remedies, in my opinion, perfectly inert. If there be any effusion, better remove it by ablution than let it cake amongst the flour.

Erysipelas is said to be epidemic in certain

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* Tom. ii. § 1. c. 13.

† Syst. Surg. vol. v. p. 381.

Vide Dr. Maharg's case of a gardener in Med. Comment. vol. 18. p. 371. where the bad effects of hot poultices were evinced by aggravating every symptom, and finally inducing gangrene.

seasons and districts.* Erythema has neither been observed to be contagious nor epidemic.† Erysipelas, as I have said, has been frequently observed to be infectious. The difference between epidemic and contagious diseases is not always easily ascertained. I think there is no doubt but that they have been frequently confounded. Dr. Willan observes that erysipelas is not to be inoculated by the matter from a vesicle. I have tried on myself and on others to inoculate this disease, by repeating the experiment of Dr. Willan; also by surrounding a limb violently affected with erysipelas, with a bandage moistened in water; and when I thought the bandage fully charged with any morbid effluvia present, I have abraded the skin from my arm, and surrounded it with the ban-

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* Vide Loubere's History of Siam, part ii. ch. 4. "The erysipelas," says this author, "is here so frequent, that among twenty men, nineteen are infected."

† Hippocrates mentions an epidemic erysipelas, and speaks of its gangrenous nature, denuding bones, &c.

Erysipelas was epidemic in France in 1130, and at Thoulouse in 1716.

Bromfield says, "this disease was epidemic for two years," in St. George's hospital—he published in 1772. Vol. i. ch. 4.

dage thus impregnated, without being able to induce the disease. This experiment I have repeated on others with the same result. How then do wounds and ulcers become erysipelatous when in the vicinity of one labouring under erysipelas? either the matter in the vesicle does not contain the infectious principle, or the effluvia, and not the fluid of the affected part acts topically, and thus generates the erysipelatous inflammation: or, what I think is yet more probable, the infection is received into the system by the lungs or otherwise, and first affects the system constitutionally, the wound or ulcer exhibiting the local and external symptoms of the disease, whereas the preceding febrile symptoms, as cold shiverings succeeded by heat, head-ache, somnolentia, and thirst, indicate that the system was first affected, and the cutaneous efflorescence a secondary effect.

Erysipelas has been said to be a family disease, and by some thought to be connected with gout. Scorbutics are accounted liable

to its attacks,* and it has been observed to be periodical ;† more frequently to attack old people, and especially those who have had their constitution broken by intemperance and disease.

In some of these cases, I am inclined to believe that the authors meant erythema.

Erysipelas has been remarked to be usually a milder disease in young than in old persons.‡

Falopius states the case of a woman, who, as often as irritated,§ was attacked with erysipelas of the nose. This, in all probability, was an

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* Apud nos scorbutici imprimis obnoxii sunt erysipelati."—Etmullerus, Chir. med. de Erys.

Vide Sennertus, Lib. iii. p. 5. § 2. cap. 4.

"Sexagenarius erat, et corpore valde cacochymo."—Diemerbroek.

"Cachecticis corporibus frequens malum est erysipelas."—Hoffman.

† Vide Sennertus, ut supra.

Diemerbroek, obs. et curat. med.

Hoffman, de diaboli potent. in corp.

——— Obs. v. de Erys. febr.

‡ "Juvenibus maxima materia nec adeo virulenta nec adeo multa, levius facit et benignius."—Hoff. § 1. c. 12.

§ "Erysipelas quoque subsequi iram, præsertim in cacochymicis et scorbuticis corporibus, res familiarissima est."—Hoffm. T. 1. p. 2. c. 1. § 15.

erythematous affection. We see similar effects in other parts of the body, the consequence of a peculiar idiosyncrasy, from eating almonds, muscles, &c.

Lastly, hot regimen repels erysipelas. I am inclined to think this would rather aggravate the symptoms of erythema.

Erythema, I have said, is best examplified in a slight scald without excoriation. The sting of some insects, more especially of the bee,* produces effects very nearly resembling those of Erysipelas, in particular if the face be the part stung; there is an effusion of serum into the cellular membrane—a shining appearance of the tumour—this yields somewhat to pressure—there is a dull redness of the part, and a sense of burning pain. They have this resemblance too in common—that they are occasioned by causes having some affinity in their nature to

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* This is Plenk's "Erythema ab ictu insecti," and Burserius's Erysipelas "à insectorum morso."

each other, namely, by a matter of a noxious nature introduced into the system. These symptoms are distinguished from each other by the following criteria—the difference of the exciting cause, in the one they originate from a cause frequently not very obvious, or if manifest, from its differing from that which has but one source, to wit, the sting of the insect. In the one fever, when present, precedes the cutaneous affection; in the other fever, when excited, is entirely symptomatic of the local affection. Vesication is not common to the inflammation following a sting. This is otherwise in erysipelas. A puncture is apparent nearly in the centre of the inflammation occasioned by the sting of the insect, and the tumour is less diffuse and more elevated to a point than what occurs in erysipelas—differences which sufficiently distinguish the one disease from the other.

With these remaks I shall conclude the diagnostic part of this Essay. I have thus attempted to draw a line of demarkation by pointing

out the peculiarities of erysipelas. It is a subject of some difficulty, and perhaps deserving of more attention than what it has hitherto obtained. Its practical utility must be obvious to every one, and this is the only apology I shall offer for having presumed to undertake its diagnosis.

APPENDIX.

It has frequently occurred to me, that Puerperal Fever was purely an erysipelatous affection; indeed this has been hinted at by many, and several respectable writers have noticed, in a very significant way, the simultaneous appearances and prevalence of these two diseases.

These observations, which are to be found dispersed in different authors, I shall affiliate for the attentive consideration of the reader, in order that he may judge for himself what just grounds there are for such an opinion.

The attainment of truth is often difficult; it resembles the handling, in the dark, a drop of quicksilver on a polished table: we sometimes feel that we embrace it with our fingers, but it

requires the greatest caution that it slip not through them; for if it does, we grope about in vain, in order to regain it; and if by chance we re-touch it, it is only to give it an impulse to fly the farther from us.

Hippocrates, as the oldest writer, so he is the first who remarks that erysipelas may attack the womb, and some of the symptoms which he enumerates resemble those of puerperal fever—"Venter intumescit, rigor, febris et imbecilitas prehendit, neque præ dolore quiescere potest, sed se ipse dejicit."*

In his book de Morbis Vulgaribus, he gives the cases of "Philini uxor," "Epicratis uxor," and of "Dromeadæ conjux," all of whom were attacked after delivery with symptoms much resembling puerperal fever.

Concerning the first, he tells us that she was seized with violent rigors, succeeded by acute

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* De Nat. Mulieb. § v.

febrile symptoms, on the fourteenth day after a natural labour. Pain at the pit of the stomach, and about the lower part of the abdomen, and in the head and loins, followed. She was visited with great watchfulness; her extremities were cold; urgent thirst, costiveness, and discoloured urine, accompanied these symptoms. On the sixth day delirium supervened; on the eighth, fresh rigors came on, and aggravated fever, the watchfulness and delirium continued, painful convulsions ensued. On the fourteenth, the whole body was affected with palpitations, and she kept constantly talking in a state of delirium. On the seventeenth she became speechless, and on the twentieth she died.

In the second instance, the circumstances were nearly similar, saving in the issue of the case; and in that of the wife of Dromeada, the symptoms appear to have been still more vehement. She, in like manner, was attacked with rigor, followed by acute fever, on the day after childbirth, in which parturition went on in an easy

and natural way—horror, nausea and loathing, with pain of the præcordia, followed; slow and laborious breathing oppressed the chest; watchfulness exhausted the patient; the urine was thick, white and turbid; cold sweats alternated with febrile heats; the head ached, and blood dropped from the nostrils; the tongue was much parched, and the thirst urgent. On the fifth day delirium came on about noon: on the sixth, fresh rigors and augmented fever succeeded; profuse cold sweats inundated the whole body; the respiration became still more slow and laboured; and shortly after she expired in convulsions.

In his aphorisms, Hippocrates also notices the fatal tendency of erysipelas, when it attacks pregnant women—"Mulieri prægnanti erysipelas in utero si fiat, lethale."* In another place he observes, "Hic morbus si prægnanti aboriatur, perit;" and elsewhere, "ex hoc

* Aphoris. Lib. v. § 43.

autem morbo paucæ evadunt,"† circumstances which concur with the nature of puerperal fever.

Mercurialis makes the same observations: "Si erysipelas uterum tentaverit," says he, "omnino mulieres pereunt, ubi sunt prægnantes, ubi vero non sunt prægnantes, paucissimæ curantur."*

Hoffman is another author who enumerates among the *subjecta*, "nec non fœminæ gravidæ." Malouin, in his "Histoire des Maladies épédemiques de 1746," inserted in the Memoires de l'Academie des Sciences, mentions the prevalence and fatality of puerperal fever during

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† De Nat. Muliebri. Etiam vide de Morb. Lib. i. § 5.

Perhaps it is worthy of a passing remark to state, that the means so strongly recommended by Dr. Gordon and Mr. Hey are precisely those laid down by the Prince of Physicians. "Ventremque movere oportet," says Hippocrates, "ubi autem febris et strangulatio demiserit, tumorque minime substiterit, "*medicamentum valentius deorsum purgans* postea propinato."—De Nat. Muliebri, § 5.

* De Uteri Infl. Prognost. Yet dissection shews that in most instances the uterus itself is seldom affected; the disease seems to be confined chiefly to the peritonæum lining the abdomen and enveloping the bowels.

that year " on a remarqué que dans le mois de Fevrier," says this author, " de vingt de ces femmes malades en couche a l'Hotel-dieu à peine en echappoit-il une;" and without appearing to be aware of their connection, he afterwards adds, " les maladies ont en général affecté pendant cette année, plus particulièrement la tête et *la peau;* les maladies," also, " de matrice ont été extraordinairement communes cette année :" and elsewhere he distinctly names " des érésipelles a la tete," as frequently occurring towards the end of September. I quote Malouin as the dry and unbiassed recorder of facts, who, professing no other object, in writing his report, than to chronicle the circumstances as they really happened, notes the concurrent prevalence of erysipelas and puerperal fever as the epidemics of the year 1746.

Pouteau, in latter times, was the first writer, as far as I am aware, who advanced that puerperal fever was an erysipelatous disease. This fever prevailed in the spring 1750: and " par l'inspection attentive des ces cadavres," says

Pouteau, "je crus appercevoir les ravages des inflammations érésipelateuses."*

Afterwards Dr. Young, formerly a professor of midwifery in the University of Edinburgh, entertained a similar opinion: in a letter of his to Mr. White,† giving an account of the puerperal fever which appeared in 1773, in the lying-in wards of the Edinburgh Infirmary, he has these words: "*To account for* this distemper, I must acquaint you, that it has been a general observation that the patients in the Infirmary, who had undergone any considerable operations, were more subject to erysipelatous swellings than formerly." Although he does not enlarge upon this remark, yet, I think, it evinces the idea he had of their connection.

Dr. John Clarke, in specifying the diseases which prevailed during the period that the puerperal fever raged in 1787 and 1788, observes,

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* Melanges de Chir. Art. de Camphire.

† White's Appendix, p. 46.

" Inflammatory diseases had been extremely infrequent; or, if they occurred at all, they were *principally* of the erysipelatous kind."*

Dr. Gordon, in his account of the contagious puerperal fever, which existed for two years in Aberdeen, countenances the opinion of Pouteau. " I will not venture positively to assert," says this excellent writer, " that puerperal fever and erysipelas are precisely of the same specific nature, but that they are connected, that there is an analogy between them, and that they are concomitant epidemics, I have unquestionable proof; for these two epidemics began in Aberdeen at the same time, and afterwards kept pace together: they both arrived at their acmé together, and they both ceased at the same time."‡ Erysipelas was then contagious in the hospital of Aberdeen, and wounds from operations, or otherwise, became erysipelatous. What tends likewise to confirm the identity of these two diseases, is their capability of conversion.

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* Practical Essays, p. 115.

This took place in the form of metastasis by erysipelas appearing externally, followed by a cessation of the fever.

" This critical erysipelas," says Dr. Gordon, " most commonly fixed on the extremities, but in a few instances on the external surface of the abdomen, which happened in a case of puerperal fever which I attended in the year 1788. The case alluded to is the wife of William Walker, at Newbridge, whom I attended, at the same time with Thomas M'Roberts' wife, whose history is given in Case VI. In both cases *the crisis was by an erysipelas*, which, in the latter, fixed on one of the upper extremities, and in the former on the integuments of the abdomen."*

The case of Thomas M'Roberts' wife is as follows:—

" In November, 1788, I was called to the wife of Thomas M'Roberts, in Belmont-street, whose

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* Page 58.

labour was attended with difficulty, owing to the presentation of the face ; however, the child was expelled by the action of the uterus, and great care was taken to guard the perinæum.

" The woman had no complaint till the second day after delivery, when I was called to her at midnight ; her husband being alarmed on account of a very long and severe shivering, with which his wife had been seized.

" When I went to the patient I found her labouring under a degree of fever, attended with a violent pain in the abdomen. She likewise complained of great sickness, and frequently vomited bileof a green colour ; which symptoms clearly ascertained the nature of the disease. I immediately bled the patient to the amount of sixteen ounces, and ordered a cooling purgative to be taken in the morning.

" When I visited her next forenoon, I found no abatement of the disease ; I therefore prescribed a repetition of the bleeding to ten ounces, and

ordered the application of fomentations to the abdomen.

" The lochia, which continued till now, were suppressed, the urine was scanty, high coloured, and passed with pain; I therefore ordered an infusion of lintseed for drink, and nitre with crystals of tartar, to be given in pretty large doses.

" On the third day there was a remission, and on the fifth a complete termination of the fever. The crisis was by a diarrhœa, accompanied with *an erysipelas of one of the arms.*"

Mr. Hey, of Leeds, in an admirable Essay on this disease, mentions, that during the existence of the puerperal fever that devastated that town from 1811 to 1812, " no disease was so prevalent as to deserve the name of an epidemic, except erysipelatous inflammations, which prevailed the *whole* period of the puerperal fever, and in many cases were of a malignant kind;

insomuch that I do not recollect ever to have seen worse cases of erysipelas than at that time."*

In chap. 3, case 7, Mr. Hey gives an instance of erysipelas supervening on puerperal fever. This case I shall quote as far as regards the erysipelas.

Having previously given the puerperal history of the case, "in which there appeared a strong predisposition to the disease during the latter part of pregnancy," Mr. Hey proceeds:—"I was sent for between seven and eight o'clock in the evening (Feb. 8th, 1810), in consequence of a fresh attack of vomiting. She complained of soreness, and a sense of fulness in the pudendum, which induced me to examine the parts; when I found a patch of erysipelatous inflammation on each side of the *nates*, and an *œdematous* enlargement of the *labia pudendi*. A fetid ichor was discharged

* Chap. 2. p. 20.

from the vagina. The urine was generally forced away by the cough, which might tend to increase the inflammation. The following medicines were prescribed :—

℞ Decoct. cinchon. ℥iss.
Ammon. carb. gr. v.
Tinct. opii gutt. x M. fiat
haustus statim sumendus, et, horis duabus elapsis, repetendus cum Tinct. opii gutt. v.

"*Half past ten, p. m.* The first draught had been taken, and the vomiting had ceased. The pulse was at 134, but it was probably quicker in consequence of the patient having just been moved. The draughts were ordered to be repeated every two hours, with three drops of tinct. opii in each, and a table spoonful of wine to be given now and then: a cooling *ointment* was prescribed for the inflammation.

"9th. She had slept some hours in the night, and all the symptoms were relieved. Pulse at 106. Tongue cleaner and more moist.

"*Evening.* In the afternoon the cough had be-

come more troublesome, and was accompanied with a darting pain in the abdomen, the swelling and hardness of which had increased. The vomiting had also returned. An opening draught had procured two natural loose stools, and the vomiting was relieved, but the pain continued the same. The *erysipelas had become more extensive*, and the patient was hot and restless. Pulse at 120. Two grains of opium were ordered to be given with an interval of four hours, and the draughts to be continued, with the addition of a tea-spoonful of lemon juice.

"10. A considerable remission of the symptoms had again taken place in the night. The skin had become cool, and the tongue cleaner. The pulse was soft, and beat no more than an 100 strokes in a minute. This truce, however, was not of long duration; the pain and vomiting soon returned, the distension of the abdomen increased, and before night the pulse got up to 120.

"From this time the disease made a regular progress without any material remission. Cordials, anti-emetics, and opiates were administered with little effect. *The erysipelas continued to spread*, and the vomiting, pain, and distention of the abdomen grew worse and worse; till, on the evening of the 12th, just seven days from delivery, death put a final period to them."

This is the only instance I have read of wherein the erysipelas appeared external of the abdomen, in which there was no metastasis.

All these concurring testimonies tend, if I presume not to far, to bear us out in the conclusion, that puerperal fever and erysipelas are individually the same; but we will not stop here. Dissection assists us in establishing their identity. In the preceding Essay on the diagnosis of erysipelas, we remarked that the most diagnostic, because the most constant, symptom of erysipelas was the effusion of serum as peculiar to its action. This, too, is the almost constant effect of the action of puerperal fever.

In the epidemic puerperal fever, which raged in the winter of 1746, before quoted from the "Memoires de la Academie des Sciences," there was found "une serosité laiteuse epanchée dans le bas ventre." Lieutaud (Hist. Anat.) also speaks of the "copia *seri* subalbicantis, tum in pectore tum in abdomine," found in purperal subjects.

Dr. John Clarke on this matter thus expresses himself: — "The first thing which, in the greater number of cases, presents itself, is a collection of fluid in the general cavity of the abdomen, sometimes very large."* He found it also in the pericardium and cavities of the thorax. Hulme,† Leake,‡ Kirk-

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* Pract. Essays, p. 135.

† Treatise on Puerperal Fever.

Vide Dissections of Cases, from p. 35 to 56. in all of which "a yellow fœtid liquor, with a mixture of pus, was found."

‡ Leake on Child-bed Fever.

See the Dissections of Anne Simms, p. 196—Harriet Truman, p. 208—Sarah Evans, p. 227—Hannah Jeffrys, p. 231. In this last instance pure serum was found.

land,* Dease,† Dr. Home,‡ Mr. White,§ Dr. Denman,‖ and Dr. Gordon,** all remark the same circumstance. I conceive it no objection to say that the serum is often found mixed with pus; because, first the texture affected is different from the external skin; and secondly, because this admixture not unfrequently occurs in erysipelas of an exterior part when joined with phlegmon.††

These facts, though not of themselves suffi-

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* On Puerperal Fever.

In his preface, Kirkland speaks of the "omentum dissolved into a whey-like matter."

† Observations on Midwifery.

In page 113 he notices the "purulent wheyish kind of fluid," effused into the abdomen.

‡ Clinical Experiments.

Dr. Home calls it a "fœtid milky fluid."

§ Appendix.

‖ On Puerperal Fever.

** Lib. Cit.—See also Rnysch, Obs. Anat. 43 and 84.

Van Swieten thought that the milk changed place, and was extravasated into the abdomen.—Comm. § 1329.

†† Vide p. 14. et seq. of the preceding Essay.

cient to assimilate these diseases, nevertheless come in collaterally as auxiliaries.

Moreover,—Puerperal fever is particularly infectious, malignant, and fatal when it occurs in an hospital. In this respect it also resembles erysipelas. Admitting their identity, this would explain the prevalence of *erysipelas infantile* in lying-in hospitals.

This disease is found to attack the delicate children of weakly mothers, a few days after birth.* Dr. Underwood, in treating of infantile erysipelas, says, "I have not often met with it but in lying-in hospitals;" and Dr. R. Bromfield, who was physician to the British Lying-in Hospital, mentions the case of a child who was born with erysipelas of the face, legs, and feet.† Dr. Underwood also notices the congenital occurrence of this disease, and adds these

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* Dr. Garthshore Med. Commun. v. 2. Dr. Heberden's Epitome.

† Med. Commun. Vol. ii. § 4.

remarkable words: "Upon examining several bodies after death (of those who had died of *erysipelas infantile*), the contents of the belly have frequently been found glued together, and their surface covered with inflammatory exudation, EXACTLY SIMILAR TO THAT FOUND IN WOMEN WHO HAVE DIED OF PUERPERAL FEVER."* Here too we have a casual remark, the more valuable because accidental and detached, and without reference to any theoretical speculation, and advanced also by a writer of great accuracy and acuteness of observation, without his appearing to see (what may *perhaps* be called) the morbid association of these diseases.

And, to conclude, we may quote Dease's Treatise on Puerperal Fever, wherein we are told of the case of a boy who, after having undergone the operation for the stone, was attacked with all the symptoms of puerperal fever.† Was it erysipelas that affected the

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* Diseases of Children. Art. Erys. Infantile.

† Obs. on Midwifery, p. 118.

wound, and thus extended to the abdomen? If so, this case would be more illustrative of the truth of the position we have aimed at to render probable, than all the circumstances collectively which we have taken such pains to detail.

But without endeavouring to exhaust the subject, some practical advantage, I think, may be derived from the facts and opinions I have stated, should erysipelas and puerperal fever be only modifications of the same morbid action. For example, where these two diseases are epidemic in the same place, at the same time, caution must be had in going from the bed-side of an erysipelatous patient, to that of a woman after delivery; and it is to the unwittingly neglecting this precaution, that I would ascribe the propagation of the disease in its two modifications, notwithstanding the care which has been taken by some practitioners to change their clothes and use ablutions after having visited a patient with puerperal fever—I say this will be unavailing, if the same care be not taken after having visited an erysipelatous patient.

The state of the system after delivery is sensible in the extreme, and open, therefore, to the impression of every morbid cause. Elsewhere I have stated the circumstances I have deemed necessary for the action of erysipelatous infection, but in the puerperal state the great sensibility of the constitution is in a manner prepared for, and thus readily receives, the operation of even a weak contagion.

The same observations apply to new-born infants being so often attacked with the erysipelas in lying-in hospitals: the infection existing in the wards, although at the time too weak to affect adults, may yet be strong enough to produce disease in children. How they come to be born with erysipelas upon them, involves questions of a more conjectural nature, and the first perhaps ought to be, is this congenital efflorescence truly erysipelatous?—

I trust these few remarks, even though they may not carry conviction to every reader, are sufficiently important to put attention on the

alert, least the medical man, whose province it is to prevent and remove disease, be not, on the contrary, the unconscious instrument of its propagation.

FINIS.

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